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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/459,574	12/13/1999	GEN SASAKI	6318-0022-2	1341
22850	7590	01/09/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			TRAN, NHAN T	
			ART UNIT	PAPER NUMBER
			2615	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/459,574

Applicant(s)

SASAKI, GEN

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-29 is/are pending in the application.
- 4a) Of the above claim(s) 7-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28 and 29 is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1 & 4 have been considered but are moot in view of the new ground of rejection.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 & 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaki et al (US 5,153,730) in view of Sansom-Wai et al (US 6,441,331 B1).

Regarding claim 1, Nagasaki discloses an image processing circuit configured to perform predetermined image processing of pixel data included in an image photographed by an image pickup device (Fig. 1), said circuit comprising:

a selector (BUS 18 under control of CPU 14) configured to receive said pixel data from the image pickup device (CCD 12) and stored pixel data from a main memory (memory 34) (see Fig. 1; col. 4, line 56 – col. 5, line 11);

a real time processing unit (digital video processor 31) connected to an output of said selector and configured to receive said stored pixel data from the main memory (34), perform a

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general image processing (i.e., color difference signal processing) of the stored pixel data by real time processing to produce processed pixel data, and output said processed pixel data to the main memory (34), the main memory being configured to store the processed pixel data in image frame units as said stored pixel data (see Fig. 1; col. 6, line 14 – col. 7, line 15 and col. 10, lines 5-14. It should be noted that “real time” is the instantaneous time when the image data is processed by the video processor 31);

a central control unit (CPU 14) including an input connected to the main memory (via BUS 18) and configured to execute exceptional image processing (image compression performed by data compressing/expanding section 32 under control of CPU 14) with respect to the stored pixel data received from said main memory (Fig. 1; col. 5, lines 3-11, 28-43 and col. 10, lines 26-50)

wherein said selector (BUS 18 under control of CPU 14) is configured to select at least one of said pixel data from said image pickup device and said stored pixel data from said main memory to be provided to the output connected to the real time processing unit. See Fig. 1 and col. 4, lines 56-63 and col. 6, lines 31-63.

Although Nagasaki teaches exceptional image processing (data compression) performed by hardware circuitry 32 under control of CPU 14, Nagasaki does not teach that the data compression is performed by executing a software routine by the CPU. However, as taught by Sansom-Wai, it is well known that data compression (i.e., JPEG compression) can be implemented by *either* hardware circuitry *or* software routine executed by a control unit of an image processing apparatus (Sansom-Wai, col. 5, lines 7-23).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the data compression processing (i.e., JPEG compression) using software routine executed by the CPU to provide a more flexible and upgradeable processing unit over a hardware compression circuitry.

Regarding claim 4, Nagasaki also discloses that the pixel data is input repetitively from said main memory to said real time processing unit to circulate over and over again (via loop at latch 46; see Fig. 2) when the selector selects the stored pixel data from said main memory. See Nagasaki, col. 8, lines 8-39.

*Allowable Subject Matter*

3. Claims 2 & 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *See the same reasons for allowance set forth below.*

4. Claims 28 & 29 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 28, the prior art of record fails to teach or fairly suggest the combination of all limitations required in claim 28 that includes "...said real time processing unit including a plurality of image processing blocks connected sequentially; a foremost stage image processing block configured to selectively receive said pixel data stored in said main memory through said selector; at least one of a second and later image processing blocks configured to selectively

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*receive at least one of a pixel data from said foremost stage image processing block and the pixel data stored in said main memory through a predetermined other selector; a rearmost stage image processing block configured to send a first processed pixel data to said main memory; and at least one of an image processing block that precedes said the rearmost stage image processing block configured to send a second processed pixel data to both the succeeding image processing block and said main memory.”*

Regarding claim 29, the prior art of record also fails to teach or fairly suggest the combination of all limitations required in claim 29 that includes “...*a timing generator configured to regulate operation timing of said real time processing unit and said image pickup device, said timing generator comprising: a synchronous controller configured to synchronously regulate operation timing of said real time processing unit and operation timing of said image pickup device when said selector selects the pixel data in the image photographed by said image pickup device; and an asynchronous controller configured to asynchronously regulate operation timing of said real time processing unit and operation timing of said image pickup device when said selector selects the pixel data stored in said main memory.”*

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

*Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.



TUAN HO  
PRIMARY EXAMINER